

Application No.: 10/621,381

Attorney Docket No. 3449-0267P

Art Unit 2835

Page 2

Substitute Supplemental Reply to Office Action dated March 18, 2004

CLAIMS

What is claimed:

1. (Original) A heat dissipator for an electrical apparatus, comprising:

a circuit board having installed thereon elements for controlling parts;

a heat generating element formed with a plurality of leads which are connected to a circuit pattern of the circuit board;

a heat conduction member brought into contact with at least the leads, for receiving heat generated in the heat generating element; and

a cabinet brought into contact with the heat conduction member and formed with an element accommodating section and/or a pair of protrusions which are shaped to be functionally associated with an outer surface of the heat generating element to ensure that the heat conduction member is brought into close contact with the leads of the heat generating element.

2. (Original) The heat dissipator as set forth in claim 1, wherein the heat conduction member is made of soft silicon.

3. (Original) The heat dissipator as set forth in claim 1, wherein the heat generating element comprises a drive IC.

Application No.: 10/621,381
Art Unit 2835

Attorney Docket No. 3449-0267P
Page 3

Substitute Supplemental Reply to Office Action dated March 18, 2004

4. (Original) The heat dissipator as set forth in claim 1, wherein the heat conduction member is simultaneously brought into contact with a molding section and the leads of the heat generating element, and the element accommodating section and/or the pair of protrusions enable the heat conduction member to be brought into close contact with the molding section and the leads of the heat generating element.

5. (Original) The heat dissipator as set forth in claim 1, wherein the leads are formed at side surfaces of the heat generating element.

6. (Currently Amended) A heat dissipator for an electrical apparatus, comprising:

a heat generating element installed on a circuit board of the electrical apparatus and having a molding section which is formed with a plurality of leads connected to a circuit pattern of the circuit board;

a cabinet formed with a pair of protrusions which project toward the heat generating element to allow a portion of heat generated in the heat generating element, which portion is conducted to the leads, to be dissipated to the outside; and

a heat conduction member interposed between the cabinet and the heat generating element and brought into contact with at least the leads and/or the pair of projections.

Application No.: 10/621,381
Art Unit 2835

Attorney Docket No. 3449-0267P
Page 4

Substitute Supplemental Reply to Office Action dated March 18, 2004

7. (Original) The heat dissipator as set forth in claim 6, wherein the heat conduction member is made of soft silicon.

8. (Original) The heat dissipator as set forth in claim 6, wherein the heat generating element comprises a drive IC.

9. (Original) The heat dissipator as set forth in claim 6, wherein the cabinet is formed with an element accommodating section which enables the heat conduction member to be brought into close contact with the molding section of the heat generating element.

10. (Original) The heat dissipator as set forth in claim 6, wherein the leads are formed at side surfaces of the heat generating element.

11. (Currently Amended) A heat dissipating structure adapted for dissipating heat generated in an electrical apparatus, comprising:

a heat generating element on the electrical apparatus having a molding section which is formed with a plurality of leads;

a cabinet formed with an element accommodating section for accommodating the heat generating element and a pair of protrusions which delimit the element accommodating section; and

Application No.: 10/621,381

Attorney Docket No. 3449-0267P

Art Unit 2835

Page 5

Substitute Supplemental Reply to Office Action dated March 18, 2004

a heat conduction member interposed between the heat generating element and the cabinet, for being brought into contact with the leads and the molding section and at the same time the element accommodating section and the pair of protrusions, whereby heat of the leads is transmitted to the protrusions to enhance a heat dissipation efficiency.

12. (Original) The heat dissipating structure as set forth in claim 11, wherein the heat conduction member is made of soft silicon.

13. (Original) The heat dissipating structure as set forth in claim 11, wherein the heat generating element comprises a drive IC.

14. (Original) The heat dissipating structure as set forth in claim 11, wherein the heat conduction member comprises a heat dissipating pad.

15. (Original) The heat dissipating structure as set forth in claim 11, wherein the leads are formed at side surfaces of the heat generating element.

16. (Original) A heat dissipator for an electrical apparatus, comprising:

a circuit board positioned having installed thereon elements for controlling parts;

Application No.: 10/621,381
Art Unit 2835

Attorney Docket No. 3449-0267P
Page 6

Substitute Supplemental Reply to Office Action dated March 18, 2004

a heat generating element formed with a plurality of leads which are connected to a circuit pattern of the circuit board and producing heat during operation;

a heat conduction member brought into contact with at least the leads, for receiving heat generated in the heat generating element; and

a cabinet contact with the heat conduction member and having at least one protrusion to ensure that the heat conduction member being closely contacted with the leads of the heat generating element.

17. (Original) The heat dissipator as set forth in claim 16, wherein the heat conduction member is made of soft silicon.

18. (Original) The heat dissipator as set forth in claim 16, wherein the cabinet is formed with an element accommodating section which enables the heat conduction member to be contacted with a molding section of the heat generating element.

19. (Original) The heat dissipator as set forth in claim 16, wherein the leads are formed at side surfaces of the heat generating element.